



HP Photosmart D5160 printer Disassembly

This guide covers disassembly in order to ease the cover-open linkage or to remove the main logic board for inspection or maintenance. Disassembly and maintenance of the print mechanism is not covered.

Written By: Philip Le Riche



INTRODUCTION

The cover-open sensor is operated by a linkage which has a tendency to stick. Slamming the lid often works in mild cases but partial disassembly will give you access to the mechanism for cleaning and lubrication.

If the printer is completely dead or won't stay online there may be a fault on the main logic board, such as a failing or failed electrolytic capacitor in the power supply section. This can be replaced, though the very fine tracks on the logic board mean that care is required in unsoldering a failed part and fitting a replacement.

You will most likely get ink on your fingers and so old clothes may be advisable. Also, small pieces of inky absorbent material can fall out as you tip the printer up, which you certainly wouldn't want to tread into the carpet!

All screws are Torx T10. Before starting, ensure you have a suitable screwdriver.

Step 1 — Outer case and logic board



- Remove any paper from the paper tray.
- Remove the paper guide from the rear of the printer. Check for any jammed paper or torn paper fragments and gently remove them. Blow out any dust and clean the rollers.

Step 2



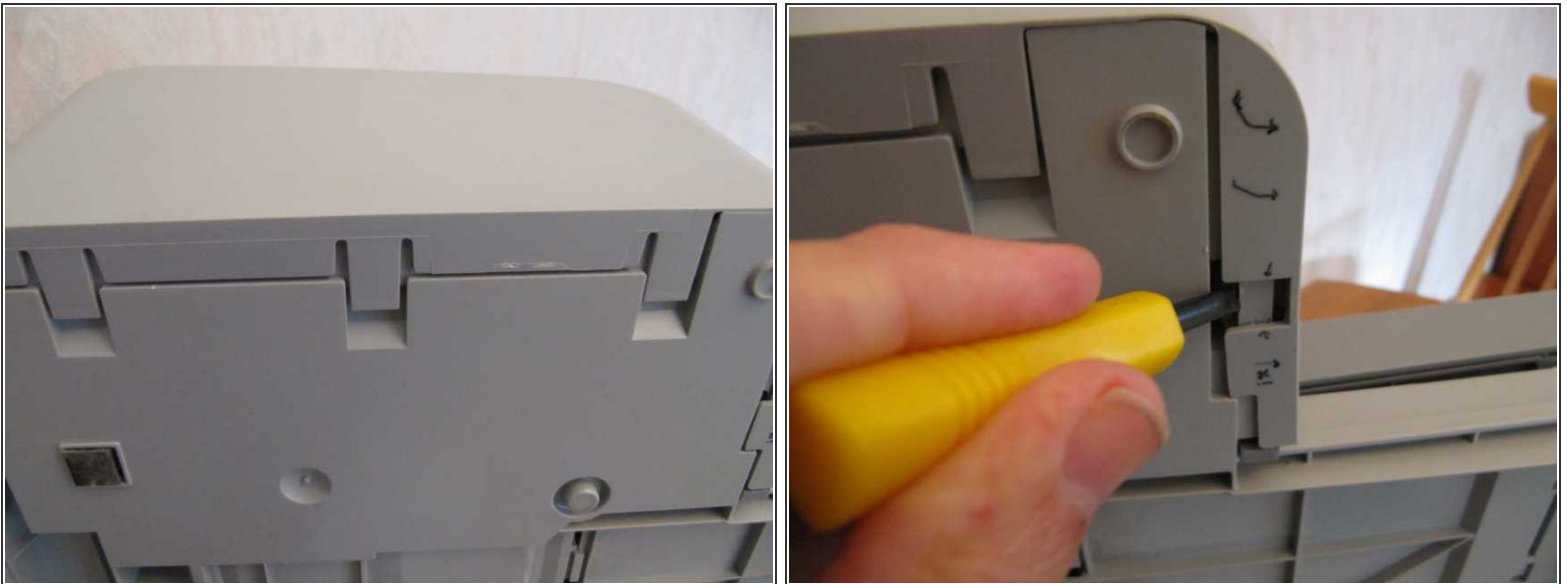
- Lift the lid. You will see a single screw at the top of the control panel. Remove this.
- Starting from the top, prise the control panel off.
- Release the ribbon cable from the control panel and put it aside.

Step 3



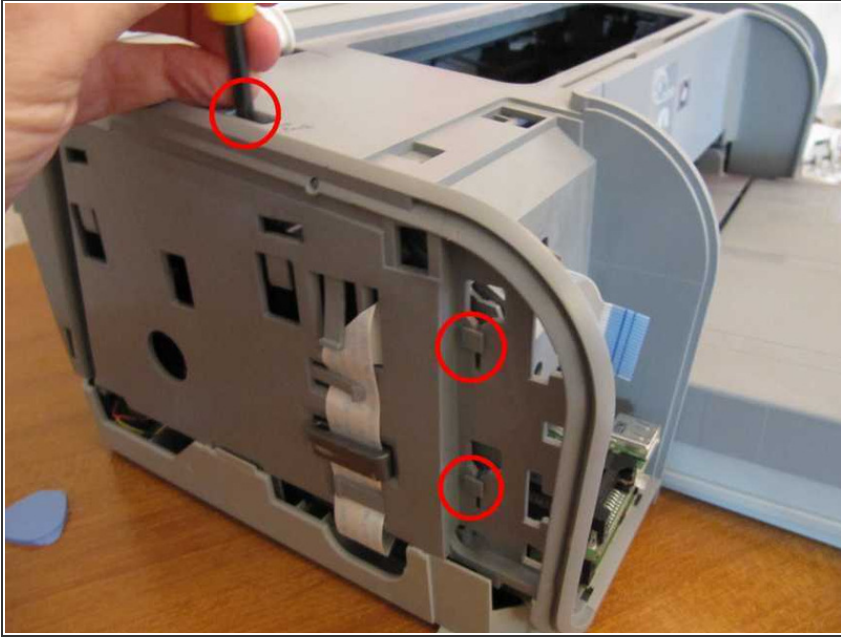
- Prise off the left hand side panel. First, release 2 clips at the top and one at the back.

Step 4



- There are 3 more clips underneath. Release these.
- The side panel is still held by a clip underneath where the control panel was. Press it from under the printer with a flat screwdriver. Ease this section of the side panel forwards, making sure it bends at the front corner, not by the clip, where it is relatively weak.
 - (In the photo you can see the arrows I marked to remind me where to bend it and where not to.)
- On reassembly, locate this latter clip before offering up the others.

Step 5



- You will now be able to see the linkage which is operated when you close the lid. The vertical section has 2 tabs which are a very loose fit in a vertical channel, causing it to jam all too easily.
- Clean off any existing lubrication or dirt, and apply a very thin smear of silicone grease to the tabs or the sides of the channel. Check for smooth operation.
- If this was the problem, you can now reassemble the printer, following the same procedure in reverse.
- If the linkage is still not satisfactory, further disassembly as described in the following steps will gain you better access to it and the possibility of a more complete cure.

Step 6



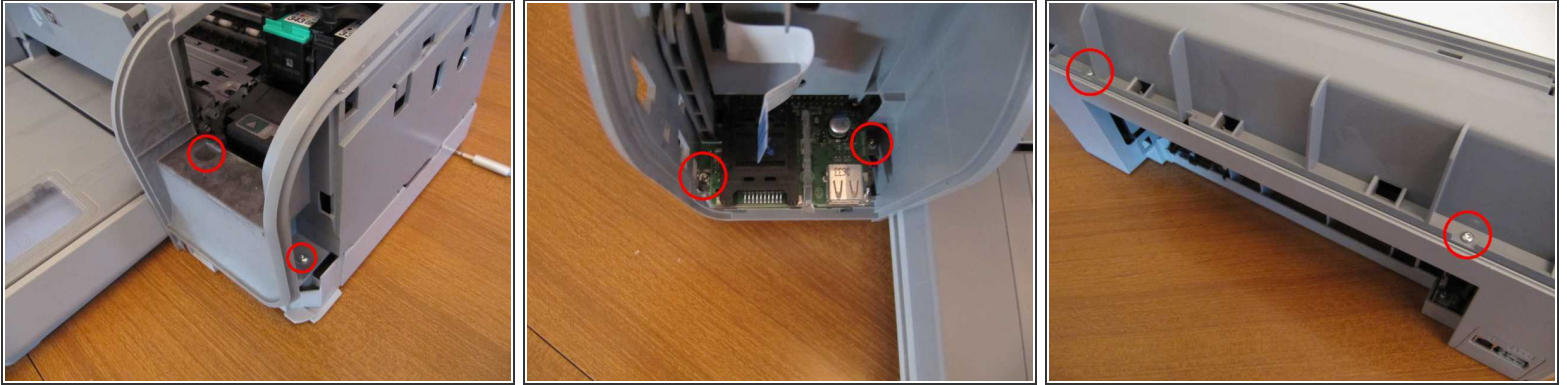
- Prise off the right hand end cover. This has clips in the same places as the left hand end cover, and the same procedure can be followed.

Step 7



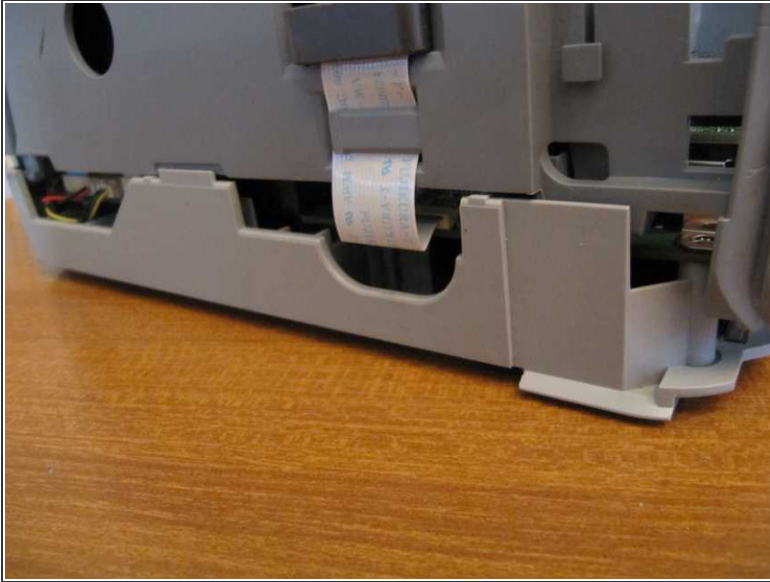
- Release the rear top cover. This is secured by 5 clips, the middle 3 of which can be released by inserting a flat screwdriver in the holes underneath them. The other 2 can be popped out quite easily.
- (On reassembly, locate the clips on the top of the printer, then insert the 5 on the back.)

Step 8



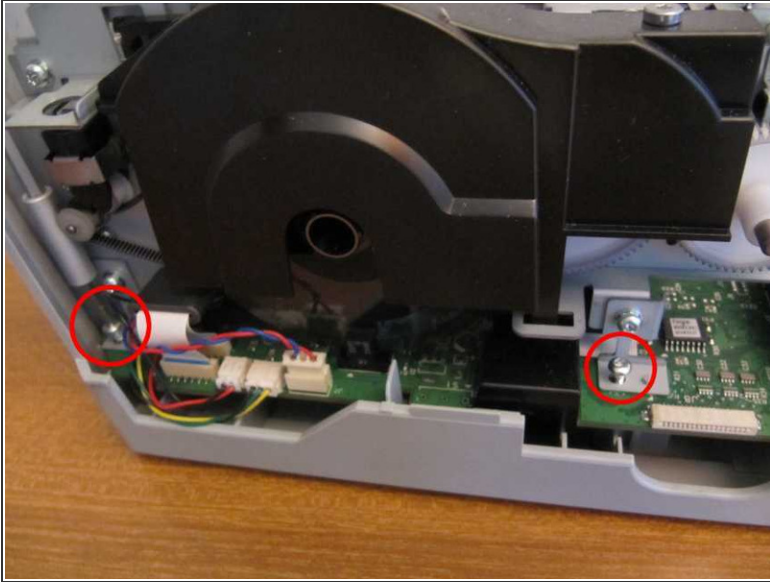
- Remove 2 screws visible from the front of the printer on the right of the paper tray, securing the print mechanism to the base. One is at the bottom of a deep hole.
- Remove 2 screws more to the left of the paper tray, either side of the card reader assembly. On the right of the card reader assembly there are in fact 2 screws, and for the moment you should only remove the rear-most one.
- Remove 2 screws from rear of the top of the printer, which were exposed when you removed the top rear cover.

Step 9



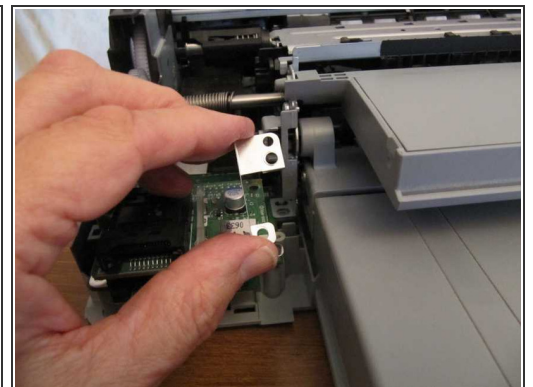
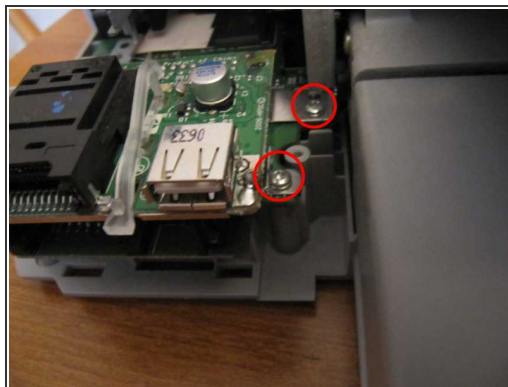
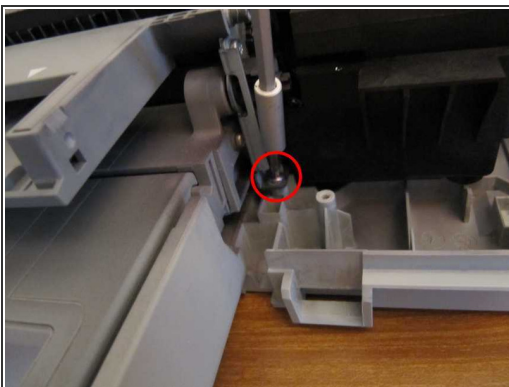
- Release the bottom end of the ribbon leading to the control panel.
- Now lift off the entire top cover. At the bottom left front you will need to ease it over the card reader assembly.
- The cover open linkage remains attached to the top cover. You can now gain full access to it if it's still causing trouble.
- The root cause of the problem seems to be that the vertical section of the linkage has too much freedom to rotate about an axis parallel to its length. You could try reducing its freedom by gluing a piece of plastic to the side member underneath the vertical piece in order to reduce the clearance.

Step 10



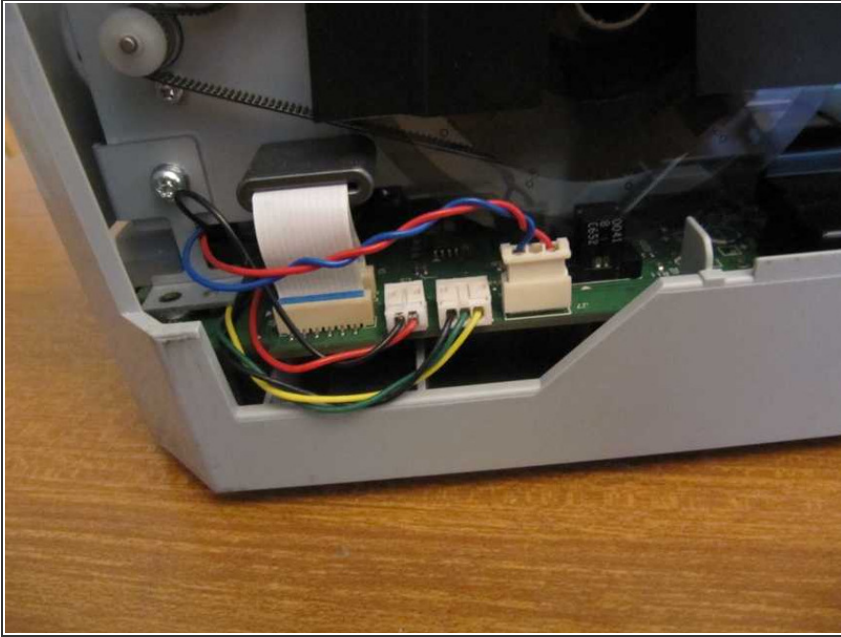
- Remove 2 screws on the left hand side, securing the print mechanism to the base through the main circuit board.
- Remove a further screw, visible from the rear of the printer, also passing through the circuit board at a rear corner.

Step 11



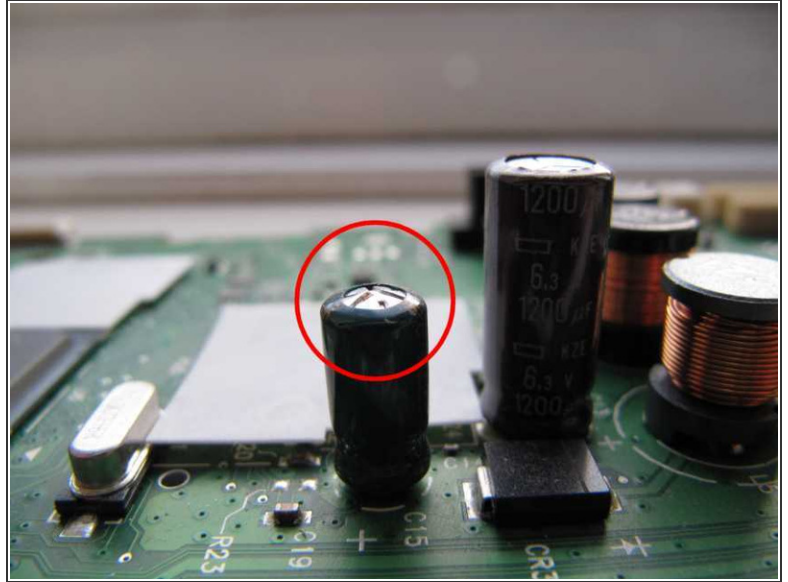
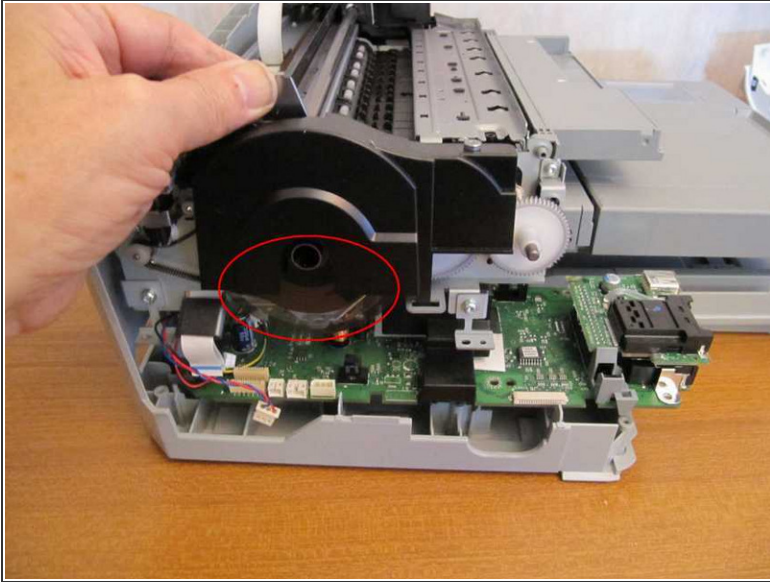
- Remove a screw, just to the right of the paper tray.
- Remove 2 more screws to the left of the paper tray. One of these releases a small piece of metal, which should be safely put aside, not to be forgotten on reassembly.

Step 12



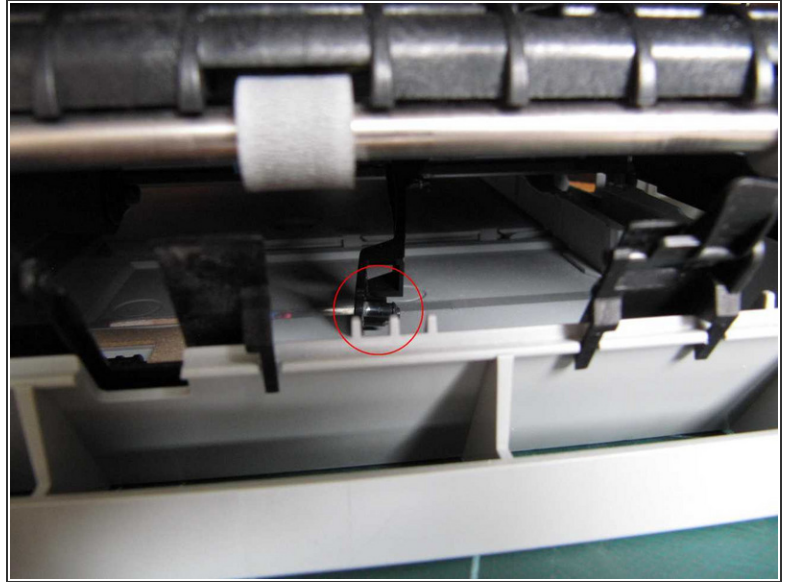
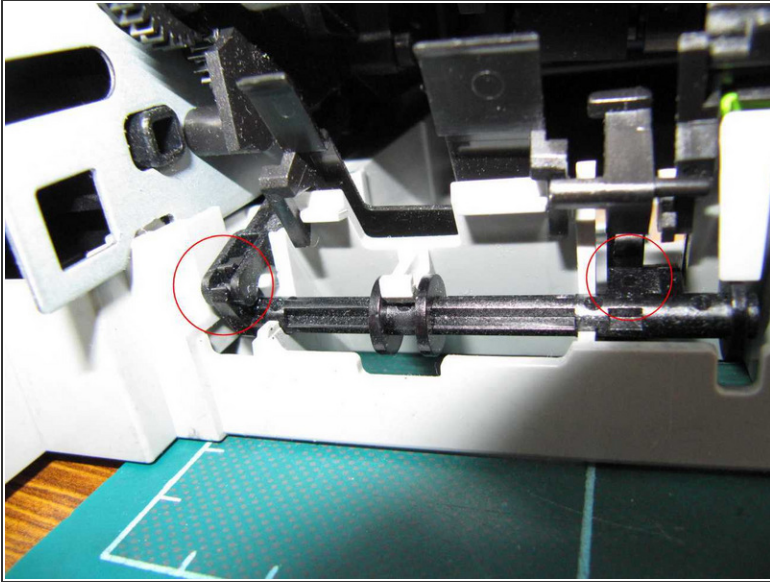
- From the left hand side near the rear of the printer, disconnect 2 ribbons, one behind the other, and 3 wire connectors.

Step 13



- Note the thin plastic encoding wheel which slots into an optical sensor on the logic board. Take great care not to damage this as you lift the print mechanism in the following steps.
- Lift the left hand end of the print mechanism. This will provide sufficient room to slide out the main logic board towards the front of the printer.
- Examine the main logic board for signs of overheating. Also look for any electrolytic capacitors with domed tops or signs of leakage, indicating that they are failing.
- There have been reports that some of these printers use electrolytic capacitors of poor quality, bearing the name TEAPO and having a green and gold sleeve. Pay special attention to any of these.
- Replacement capacitors should have the same or up to double the capacity (quoted in μF), and the same or preferably higher Voltage and Temperature ratings.
- Care is required in removing and replacing any suspect or failed components as the tracks on the circuit board are very fine.

Step 14



- The entire print mechanism can be removed from the base. First, release a lever at the left hand side of the back of the printer from its clip on a spindle. You may have to gently press on a tab near the other end of the spindle in order to bring the clip forwards so as to be able to release the lever.
- The print mechanism can now be lifted out. It may take some jiggling to release the metal mechanism frame from the plastic base at a point close to the clip which retains the aforementioned lever.
- On reassembly (or if you set the mechanism down on the bench) be sure to check that the lever and roller which press down on the paper in the tray is angled backward. If not, the weight of the mechanism will bend the lever and possibly break it or push off the roller (as has happened in the 2nd photo).
- On order to be able to position the print mechanism correctly you will need to lift the lever which fits into the clip on the spindle, so that it is positioned to do so.

To reassemble your device, follow these instructions in reverse order.

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